

Other UDOT Traffic Information Brochures:

- Speed Limits
- School Zones
- Crosswalks
- Traffic Signals
- Left Turn Traffic Signals
- Pedestrian Signals

For More Information:

Please contact a UDOT Regional
Traffic Engineer located in your
region of the State:

Northern Utah (801) 399-5921

Salt Lake County (801) 975-4900

Utah County (801) 227-8019

Southern Utah (435) 893-4799

Or visit the UDOT website at
<http://www.dot.state.ut.us>

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Division of Traffic and Safety
4501 South 2700 West
Salt Lake City, Utah 84114-3200

UDOT Traffic Information Brochure

Traffic Signals



**Utah Department of
Transportation**

**Division of Traffic
& Safety**

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Traffic Signals

The Utah Department of Transportation (UDOT) has prepared this Traffic Information Brochure to educate concerned citizens interested in learning more about traffic signals.

This brochure describes some of the advantages and disadvantages of traffic signals and provides answers to commonly asked questions about the process for installing a traffic signal.

Advantages of Traffic Signals

When properly used, traffic signals are valuable devices for the control of vehicular and pedestrian traffic. They assign the right-of-way to the various traffic movements and thereby influence traffic flow.

Traffic signals that are properly designed, located, and maintained will have one or more of the following advantages:

- Provide for orderly movement of traffic
- Increase traffic-handling capacity of the intersection
- Reduce frequency and severity of certain types of crashes, especially right-angle collisions
- Provide for continuous movement of traffic at a definite speed along a given route
- Interrupt heavy traffic at intervals to permit other traffic, vehicular or pedestrian to cross.

Disadvantages of Traffic Signals

Traffic signals are often considered a “cure-all” for all traffic related problems at intersections. Unfortunately this is not the case since unjustified traffic signals can adversely affect the

safety and efficiency of vehicular, bicycle, and pedestrian traffic.

Improper or unjustified traffic signals can result in one or more of the following disadvantages:

- Excessive delay
- Excessive disobedience of the signal indications
- Increased use of less adequate streets as motorists attempt to avoid the traffic signals
- Increased congestion, air pollution, gasoline consumption
- Significant increases in the frequency of collisions (especially rear-end collisions).

Commonly Asked Questions:

How does UDOT determine where traffic signals are installed?

An engineered study of traffic conditions, pedestrian characteristics, and physical characteristics of the location is performed to determine whether installation of a traffic signal is justified at a specific location. Traffic signal justification is based upon minimum conditions called warrants, as described in the *Manual on Uniform Traffic Control Devices* (MUTCD).

The MUTCD is a national standard developed by all fifty states and the federal government. The purpose of this standard is to ensure uniformity in the design of traffic signals, signs, and pavement markings throughout the country. UDOT installs and maintains traffic signals in accordance with the MUTCD.

The study includes an analysis of applicable factors contained in the following signal warrants and the existing operation and safety at

the study location:

- Traffic and pedestrian volume
- School crossing
- Crash experience.

The satisfaction of one or more signal warrants does not in itself require the installation of a traffic signal. A panel of traffic engineers must first review the study and visit the location to make a final decision regarding the justification of the signal. If the decision is made that signalization is warranted then the project is programmed for design development and construction as funds become available.

What happens once the traffic signal is warranted (justified)?

The design plans are developed and reviewed at specific milestones. Environmental and right-of-way documents are prepared and public meetings are held if necessary. Once the design plans are completed, the signal project is publicly bid and awarded to an electrical construction contractor to install.

How much does a traffic signal cost?

A typical traffic signal installation costs approximately \$125,000. This includes some cost for miscellaneous work items such as sidewalk repair, pedestrian access ramps, and pavement markings which are often required for a new signalized intersection.

How is a study for a new traffic signal requested?

A written request must be made to the UDOT Region Director in your part of the State. You may obtain the appropriate name and address by contacting the local UDOT region office at the numbers listed on the back of this brochure.